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SOVIET BLOC CIVIL AVIATION ACTIVITIES
IN AFRICA

13 December 1963

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FOREWORD

This study presents a summary of Soviet Bloc international civil air activities in Africa. It has been prepared to support "A Study of Air Transportation in Africa" which is currently being undertaken by the Civil Aeronautics Board.

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CONTENTS

	<u>Page</u>
1. Introduction	1
a. Bloc Air Rights in Africa	2
b. Bloc Air Routes	4
2. Efforts to Expand the African Route System	5
a. In Africa	5
b. Through Africa to Latin America	6
3. Technical Assistance Programs	7
a. Sales of Aircraft	7
b. Technical Assistance	10

TABLES

1. Civil Air Agreements Between Bloc and African Countries.
2. Airline Routes Between Africa and the Bloc, November 1963.
3. Characteristics of Bloc Aircraft Purchased by African Countries.

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Soviet Bloc Civil Air Activities in Africa

1. Introduction

The persistent efforts of the Soviet Bloc to expand its international civil air route systems during the last two years have been most noticeable in Africa, where both the USSR and Czechoslovakia have achieved considerable success in obtaining traffic and transit rights from the newly established states. The air rights which the Bloc has obtained in Africa and those it is currently pressing for reflect a determination to establish air connections throughout the developing countries of Africa and across the South Atlantic to Latin America.*

The expansion of Bloc international air activities in these areas reflects political rather than purely commercial objectives. Aeroflot has no chance of commercial profitability on any of its African routes (existing or proposed) within the foreseeable (~~commercially~~) future. Aeroflot's international operations in Africa are of greatest value as a means of demonstrating the accomplishments of Soviet technology and as a controlled means for a substantial movement of economical and technical specialists to developing countries. The services also are used to transport mail and commercial freight and to provide logistic support for Soviet foreign missions.

* See map.

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A significant part of the Bloc civil air activity in Africa has consisted of sales of aircraft and the provision of technical assistance to the airlines of Ghana, Guinea and Mali. The poor performance of the aircraft and the feeble manner in which Bloc advisers have carried out their instructional program has disillusioned the recipients, led to partial abandonment of the service, the return of some equipment to the USSR, and substantial financial losses to the participating countries.

a. Bloc Air Rights in Africa*

(1) Aeroflot

Aeroflot has negotiated bilateral air agreements with Ghana, Guinea, Mali, Morocco, Somali Republic, Sudan and the UAR. It has obtained East-West overflight rights from Niger. In addition, agreement in principle on air rights has been reached with Libya and Algeria, and formal agreements may be signed at anytime. Ethiopia, Chad and Nigeria have been approached by the Soviets and have refused Soviet requests for air rights. Ethiopia has commercial reasons for refusing, but Chad and Nigeria have refused air rights because of US pressure (mainly the argument that an Aeroflot air route across Africa would enhance Soviet opportunities for subversion). If Nigeria grants air rights, Chad is likely to follow suit.

Aeroflot's agreement with Sudan is especially valuable because it provides beyond rights to points in Saudi Arabia, Ethiopia, Somali Republic, Kenya, and the Malagasy Republic in East Africa, and to points in Nigeria, Ghana, Guinea, Mali and Morocco in West Africa.

* See Table 1.

Moreover, beyond rights to Brazil are apparently included. The bilateral which Aeroflot recently concluded with the Somali Republic also provides beyond rights at Mogadiscio, thus further easing the way into East Africa for Aeroflot.

In another significant agreement, Morocco allegedly has given Aeroflot landing rights at Casablanca for routes into South or Central America. However, Aeroflot flights to Cuba from Morocco have not been authorized.

(2) CSA

The Czechoslovak Airline, CSA, which belongs to IATA, has completed bilateral air agreements with Ghana, Guinea, Mali, Morocco, Senegal, Tunis and the UAR, and has initialled an agreement with Sudan. In addition, Nigeria has issued a "provisional permit" to CSA authorizing flights on the route Prague-Tunis-Accra-Lagos. An agreement may be pending with Algeria, for CSA has included Algiers as a stop on its Prague-Bamako route in the November 1963 issue of ABC World Airways Guide.

(3) Other Bloc Airlines

The UAR has concluded bilateral air agreements with Poland, Hungary, Bulgaria and Rumania. Ghana, another African state determined to remain non-aligned has completed bilaterals with Hungary, Bulgaria, Rumania and Albania. Algeria and Tunisia have recently completed bilateral civil air agreements with Bulgaria.

b. Bloc Air Routes*

(1) Aeroflot

Aeroflot has been operating into Cairo from Moscow since 1958. In 1962, Aeroflot initiated a determined campaign to obtain the bilateral agreements necessary to establish a civil air network in Africa. At the present time the Soviet airline operates once weekly into East Africa on the route Moscow-Cairo-Khartoum with one additional weekly flight Moscow-Cairo, and once weekly into West Africa on the route Moscow-Belgrade-Rabat-Bamako-Conakry-Accra. The route to Khartoum is soon to be extended to Mogadiscio.

(2) CSA

CSA presently flies two routes into Africa from Prague. One is a route to Cairo and the other is the West Coast route from Prague to Conakry and Bamako. The route to Cairo is flown twice each week - once as a leg on the Prague-Djakarta route and once via Athens. The West Coast route is also flown twice weekly - once in the sequence Prague-Marsailles-Rabat-Dakar-Conakry and return, and once in the sequence Prague-Zurich-Rabat-Dakar-Bamako and return. There is evidence that CSA intends to add Algiers to the latter schedule as soon as permission can be obtained from the Algerian authorities.

(3) Other Bloc Airlines

(a) LOT, Poland's national airline, serves a route to Cairo from Warsaw via Vienna and Athens.

* See Table 2.

(b) TABSO, Bulgaria's national airline has suspended services on its route Sofia-Rome-Tunis-Algiers.

(c) MALEV, Hungary's national airline operates a ~~weekly~~ weekly flight between Budapest and Cairo. *via Athens.*

2. Efforts to Expand the African Route System

a. In Africa

(1) Aeroflot

The USSR is trying to obtain overflight rights from Chad and technical landing or overflight rights from Nigeria, in order to join its East and West African routes into a circular system connecting Moscow with most of the northern half of the continent. The route could be flown with IL-18 aircraft in the order Moscow-Cairo-Khartoum-Lagos-Accra-Conakry-Bamako-Rabat-Belgrade-Moscow.

(2) CSA

CSA has obtained traffic rights from Tunis for a North-South route Moscow-Warsaw-Prague-Tunis-Lagos, and Nigeria has granted a "provisional license" to operate the route. The route has not been flown. Overtures for an air agreement with Algeria last February may indicate that CSA would like to add Tunis and Algiers to its West Coast flight to Bamako.

An interest on the part of CSA in expanding its route system into East and Central Africa seems indicated in its efforts to obtain rights to fly from Cairo to and beyond Khartoum. As a member of ICAO, Czechoslovakia can obtain permission for CSA to make the necessary overflights to connect a route to Khartoum with its route in West Africa.

b. Through Africa to Latin America

(1) Aeroflot

The USSR has approached Brazil for a bilateral that would let Aeroflot fly to Rio de Janeiro via Recife. The Brazilian civil aviation authorities are not in favor of letting more carriers into the South Atlantic service and see no commercial advantage at the present time in obtaining a route through Africa to Moscow for Pan Air do Brazil. The Brazilian Foreign Ministry favors the agreement and it can be expected that the USSR will continue to press for it because Brazil can supply the essential connections for an economically favorable route network from the USSR to and through Central and South America.

The USSR continues to press Guinea for technical landing rights for a route to Havana. Aeroflot presently flies to Havana from Moscow with one stop at Murmansk. This hazardously long flight (4,860 nautical miles from Murmansk to Havana) reduces the payload of the TU-114 to an extremely uneconomic level. Aeroflot would like to fly to Havana from Conakry (4,050 nautical miles) as the last sector of a route from Moscow via Belgrade and Bamako (overflying either Libya or Algeria). The TU-114 would be used for the trip. Guinea is presently cooperating with the US to prevent Aeroflot from reaching Cuba by this route, but its technical reasons for denying the flights (all fuel supplies at Conakry contained some USAID fuel and could not be used to service foreign aircraft) are no longer valid.

- 6 -

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For a time, Aeroflot exhibited an interest in flying the TU-114 to Havana from Algeria and has Algerian permission to do so. However, the distance to Havana (4,575 nautical miles from Ouargla) is not substantially less than the Murmansk-Havana distance and is 525 miles longer than the Conakry-Havana route. Moreover, the airports near Algiers are either not long enough or not strong enough for a heavily loaded TU-114, and the airport at Ouargla, which may be long and strong enough, is difficult to supply with large quantities of jet fuel because it has no rail connection to the coast. Aeroflot has not attempted to fly the TU-114 to Havana from Algeria, and may be waiting for the correction of these technical problems at one of Algeria's airports. Also, Aeroflot may expect eventual success in its efforts to obtain permission to fly to Havana from Conakry.

(2) CSA

Czechoslovakia has approached Brazil regarding an air agreement but received no response. CSA has a bilateral with Senegal and probably could get onward rights at Dakar. With the IL-18 aircraft now used on its African routes, CSA could easily reach Recife from Dakar and eventually expand its routes into South and Central America.

3. Technical Assistance Programs

a. Sales of Aircraft

The USSR and Czechoslovakia have managed to sell a total of 36 transport aircraft to African countries, as shown in the following tabulation:

<u>Importing Country</u>	<u>Exporting Country</u>						<u>Units</u>
	<u>USSR</u>				<u>Czechoslovakia</u>		<u>Totals</u>
	<u>AN-2</u>	<u>IL-14</u>	<u>AN-12</u>	<u>IL-18</u>	<u>Aero-145</u>	<u>IL-14</u>	
Ghana	0	0	1	8	0	0	9
Guinea	2	0	0	3	2	4	11
Mali	5	3	0	3	5	0	16
	<u>7</u>	<u>3</u>	<u>1</u>	<u>14</u>	<u>7</u>	<u>4</u>	<u>36</u>

In each instance the aircraft were provided on long-term credit with low interest rates, as integral parts of general economic assistance programs. For example, the USSR's terms of sale of three IL-18's with spare engines to Guinea at a total cost of about \$6.6 million called for payment of 10 percent on delivery and the rest in eight annual installments with interest at 2.5 percent on the unpaid balance. The terms being quoted by a US aircraft manufacturer to a South American carrier at the same time called for repayment in five annual installments with interest at 5 percent on the unpaid balance.

The repayment terms quoted by Czechoslovakia for six IL-14's bought by Guinea are not known, but the contract specified that repayment in full for \$365,000 worth of spare parts was to be made in grain deliveries within a 15-month period. Moreover, a reduction from list price of 20 percent was allowed on all material delivered by the Czechs for maintenance of the IL-14's.

Mali paid the USSR \$180,000 each for used IL-14's and Guinea paid Czechoslovakia \$248,000 each for six new Czech-built IL-14's.* The AN-2's were sold for around \$75,000. The high-performance aircraft were sold at prices of nearly \$1.9 million for the IL-18 and over \$2 million for the AN-12. These latter prices are slightly less than the estimates of the production costs of these aircraft. The price paid by Guinea for three IL-18's was made even more attractive, however, by the fact that 12 spare engines, valued at \$1,117,500 were included at no extra charge. In an export transaction, concluded at about the same time, the basic price of a Lockheed Electra (an aircraft comparable to the IL-18) was \$2.6 million not including \$93,000 for each spare engine. As a further attraction, the Bloc also was able to offer immediate delivery of its aircraft whereas Western manufacturers have rather extended waiting periods before delivery.

The experience of Mali, Ghana and Guinea with the operation of Soviet high-performance aircraft, however, has indicated that they are not really bargains. They have proven to have poor economy in operation and to require frequent replacement of engines and parts. Moreover, according to the manager of Air Guinea, it is next to impossible to obtain parts for Bloc aircraft from either Czechoslovakia or the USSR.

The high-performance aircraft purchased from the USSR by Ghana, Guinea and Mali have seen very little service. Ghana Airways has two scheduled IL-18 flights per month on each of the following

* One of these, specially equipped for the President of Guinea cost \$320,000.

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routes: Accra-Bamako-Rabat, Accra-Kano-Khartoum-Asmara-Aden, Accra-Cairo-Beirut. Ghana has returned its AN-12 and four of its eight IL-18 aircraft to the USSR, but, needless to say, the remaining four IL-18's are too many for the present needs of Ghana Airways. During the twelve-month period, July 1962 - June 1963, the eight IL-18's averaged 224 hours flying time per annum per aircraft which may be compared to a normal average for Western carriers of 2,500 hours, and the average number of passengers per flight was 14 out of a seating capacity of 78. Mali and Guinea have had similar experiences with their IL-18's. During the twelve-month period, Ghana Airways lost nearly \$2.5 million dollars on the operation of the IL-18's. They recognize that two routes being operated with IL-18's (Accra-Khartoum-Asmara-Aden, and Accra-Bamako-Rabat) are flown for purposes of political prestige with no possibility of enough traffic to justify the use of any type of high-performance aircraft. The route (Accra-Cairo-Beirut), now flown by IL-18, is considered to have prospects of eventual profitability if the IL-18 can be taken off and a Britannia put on. One member of the Ghana National Assembly has suggested that the remaining four IL-18's should be exchanged with the USSR for agricultural implements.

b. Technical Assistance Programs

The USSR and Czechoslovakia have extended considerable technical assistance to Ghana, Guinea and Mali. These programs have involved the use of Bloc technicians in the recipient countries and the training of African nationals in both Czechoslovakia and the USSR.

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Czechoslovakia provides flight and ground servicing crews for Air Guinea's IL-14 aircraft and Air Mali's DC-3 aircraft (acquired from UK). In addition, Czechoslovakia provides airline management services and control tower personnel for both Air Guinea and Air Mali. The USSR provides flight crews and ground servicing personnel for all the IL-18 aircraft owned by Ghana, Guinea and Mali. Eventually these tasks are to be assumed by Bloc-trained personnel.

The contract concluded between Guinea and the USSR provided for flight and technical training of Guineans as part of the total cost of acquiring three IL-18 aircraft. It also stipulated that the cost of maintaining Soviet technical personnel in Guinea to operate, maintain and schedule the aircraft and to train Guineans in these tasks would be defrayed by Guinea. Presumably, therefore, it is that part of flight and maintenance training to be carried out in schools in the USSR which is included free of extra cost in the aircraft purchase contract.

In its contract with Guinea, Czechoslovakia, in a specific clause, provided for the cost of training Guinean personnel in residence in Czechoslovakia. The total cost of training 20 pilots (25-month course), and 10 technicians (24-month course) for the IL-14 were billed at \$928,000. This charge was divided into three parts. The first part, \$173,000, was given to Guinea as a gift. The second part, \$403,000, was to be repaid in five annual installments (on the first of August each year, 1961 through 1965) with 2½ percent interest charged

on the unpaid balance. The third part, \$352,700, is to be billed to Guinea every three months after payment of the second part has been completed (in effect apparently, this amount is to be carried interest-free for 5 years). Payment specified for the second part of this credit (\$403,000) is to be covered by surplus commodities specified in the Economic Agreement between Guinea and Czechoslovakia, dated 3 June 1959.

The Czechoslovak management program has been very unsatisfactory to Air Guinea. The Czechs have not made sincere efforts to develop profitable operations for Air Guinea nor to train local personnel to operate the airline. This dissatisfaction has been a principal factor in the decision that Guinea made in late 1962 to hire the consultative services of a US airline to help Air Guinea establish profitable domestic and regional service.

A further economic assistance project carried out in Guinea by the USSR was the extension of the runway at Conakry from 5,900 feet to 9,500 feet, in order to accommodate high-performance aircraft. This project was completed in mid-1962.

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Table 1

CIVIL AIR AGREEMENTS BETWEEN BLOC AND AFRICAN COUNTRIES

	USSR	CSSR	POLAND	HUNGARY	BULGARIA	ROMANIA	ALBANIA
Algeria	I	I			X 1963		
Egypt	X 1958	X 1958	(X 1956 (X 1963	X 1958	X 1959	X 1958	
Ghana	X 1962	X 1961		X 1961	X 1962	X 1962	X 1961
Guinea	X 1962	X 1961					
Libya	P						
Mali	X 1962	X 1961					
Morocco	X 1962	X 1961					
Niger	T 1962						
Senegal		(X 1962 (T 1960					
Somalia	X 1963						
Sudan	X 1962	P					
Tunisia		X 1963					X 1963

NOTES:

- X Bilateral agreement signed
- P Bilateral agreement proposed
- I Interest in bilateral agreement
- T Overflight or technical landing rights

Table 2

AIRLINE ROUTES BETWEEN AFRICA AND THE BLOC, NOVEMBER 1963

<u>Airline</u>	<u>Flight Number</u>	<u>Frequency</u>	<u>Aircraft</u>	<u>Route</u>
Aeroflot (USSR)	SU-035	Weekly	IL-18	Moscow-Cairo
	SU-029	Weekly	IL-18	Moscow-Cairo-Khartoum
	SU-021	Weekly	IL-18	Moscow-Beleguade-Rabat-Bamako-Conekry-Accra
CSA (Czechoslovakia)	OK-520	Weekly	TU-104A	Prague-Athens-Cairo
	OK-516	Weekly	TU-104A	Cairo-Dhahran-Bombay-Rangoon-Pnom-Penh-Djakarta
	OK-513	Weekly	IL-18	Prague-Marseille-Rabat-Dakar-Conekry
LOT (Poland)	OK-511	Weekly	IL-18	Prague-Zurich-Algiers-Rabat-Dakar-Bamako
	LO-251	Weekly	IL-18	Warsaw-Vienna-Athens-Cairo
	(Service suspended)			Sofia-Rome-Tunis-Algiers
TABSO (Bulgaria)				
MALBY (Hungary)	MA-405	Weekly	IL-18	Budapest-Cairo

* First mentioned in November issue of ABC World Airways Guide.

Table 3

CHARACTERISTICS OF BILOC AIRCRAFT PURCHASED BY AFRICAN COUNTRIES

<u>Type and Model</u>	<u>Engines</u>		<u>Number of Passengers</u>	<u>Payload (Pounds)</u>	<u>Take Off Weight (Pounds)</u>	<u>Range (Nautical Miles)</u>	<u>Average Speed (Knots)</u>
	<u>Number</u>	<u>Output (HP)</u>					
IL-18	4	16,000	73 to 111	25,400	134,000	2,890	342
AN-12	4	16,000	81 to 91 troops	22,000	119,000	1,600	335
IL-14	2	3,800	32 to 36	7,827	38,590	965	178
AN-2	1	1,000	10	3,300	11,000	650	97
Aero-145	2	280	3	about 700	3,520	780	139

